

1 1. An isolated nucleic acid molecule comprising a nucleotide sequence encoding
2 an RDE-1 polypeptide, wherein the nucleic acid molecule hybridizes under high
3 stringency conditions to the nucleic acid sequence of Genbank Accession No. AF180730
4 (SEQ ID NO:2) or its complement, or nucleic acid sequence set forth in SEQ ID NO:1 or
5 its complement.

1 2. The isolated nucleic acid of claim 1, wherein the nucleic acid can complement
2 an rde-1 mutation.

1 3. An isolated nucleic acid of claim 1, wherein the nucleotide sequence encodes
2 the amino acid sequence of SEQ ID NO:3.

1 4. A substantially pure RDE-1 polypeptide encoded by the isolated nucleic acid
2 of claim 1.

1 5. An antibody that specifically binds to an RDE-1 polypeptide.

1 6. A method of enhancing the expression of a transgene in a cell, the method
2 comprising decreasing activity of the RNAi pathway.

1 7. The method of claim 6, wherein rde-2 expression or activity is decreased.

1 8. An isolated nucleic acid molecule comprising a nucleotide sequence encoding
2 an RDE-4 polypeptide, wherein the nucleic acid molecule hybridizes under high
3 stringency conditions to the nucleic acid sequence of SEQ ID NO:4 or its complement.

1 9. The isolated nucleic acid of claim 8, wherein the nucleic acid can complement
2 an rde-4 mutation.

1 10. An isolated nucleic acid of claim 8, wherein the nucleotide sequence encodes
2 the amino acid sequence of SEQ ID NO:5.

1 11. A substantially pure RDE-4 polypeptide encoded by the isolated nucleic acid
2 of claim 8.

1 12. An antibody that specifically binds to an RDE-4 polypeptide.

1 13. A method of preparing an RNAi agent, the method comprising incubating a
2 dsRNA in the presence of an RDE-1 protein and an RDE-4 protein.

1 14. A method of inhibiting the activity of a gene, the method comprising
2 introducing an RNAi agent into a cell, wherein the dsRNA component of the RNAi agent
3 is targeted to the gene.

1 15. The method of claim 14, wherein the cell contains exogenous RNAi
2 sequences.

1 16. The method of claim 14, wherein the exogenous RNAi sequence is an RDE-1
2 polypeptide or an RDE-4 polypeptide.

51